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APPLICATION NO	. F	ILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,011		03/30/2001	Tao Chen	010008	6738
23696	7590	09/03/2003			
Qualcomm Incorporated Patents Department 5775 Morehouse Drive			EXAMINER LELE, TANMAY S		
					San Diego,
				2684	
				DATE MAILED: 09/03/2003	7

Please find below and/or attached an Office communication concerning this application or proceeding.

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-"	*	Application No.	Applicant(s)	• ,
		09/823,011	CHEN ET AL.	
	Office Action Summary	Examiner	Art Unit	
		Tanmay S Lele	2684	
Period fo	The MAILING DATE of this communication app or Reply	ears on the cover sheet with the	correspondence address	
THE N - Exter after - If the - If NO - Failur - Any r	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. nsions of time may be available under the provisions of 37 CFR 1.1: SIX (6) MONTHS from the mailing date of this communication. period for reply specified above is less than thirty (30) days, a reply period for reply is specified above, the maximum statutory period verous to reply within the set or extended period for reply will, by statute eply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be to y within the statutory minimum of thirty (30) da vill apply and will expire SIX (6) MONTHS fror , cause the application to become ABANDON	mely filed ys will be considered timely. In the mailing date of this communication. ED (35 U.S.C. § 133).	
1)🖂	Responsive to communication(s) filed on 13.	<u>lune 2003</u> .		
2a)⊠	This action is FINAL . 2b) ☐ Th	is action is non-final.		
3)	Since this application is in condition for allowa closed in accordance with the practice under			
•	on of Claims			
•	Claim(s) <u>1-30</u> is/are pending in the application			
	4a) Of the above claim(s) is/are withdraw	wn from consideration.		
·	Claim(s) is/are allowed.			
	Claim(s) <u>1-30</u> is/are rejected.			
Ň	Claim(s) is/are objected to.			
-	Claim(s) are subject to restriction and/o on Papers	r election requirement.		
9)🖾 -	The specification is objected to by the Examine	r.		
10)🛛	The drawing(s) filed on 22 June 2001 is/are: a)	igttize accepted or b) $igsqcup$ objected to $f by$	the Examiner.	
	Applicant may not request that any objection to the	e drawing(s) be held in abeyance.	See 37 CFR 1.85(a).	
11) 🔲 -	The proposed drawing correction filed on	_ is: a)□ approved b)□ disappı	roved by the Examiner.	
	If approved, corrected drawings are required in re	ply to this Office action.		
12) 🗌 .	The oath or declaration is objected to by the Ex	aminer.		
Priority u	ınder 35 U.S.C. §§ 119 and 120	•		
13)	Acknowledgment is made of a claim for foreign	n priority under 35 U.S.C. § 119((a)-(d) or (f).	
a)[☐ All b)☐ Some * c)☐ None of:			
	1. Certified copies of the priority document	s have been received.		
	2. Certified copies of the priority document	s have been received in Applica	tion No	
* 9	3. Copies of the certified copies of the prio application from the International Bu See the attached detailed Office action for a list	reau (PCT Rule 17.2(a)).	_	
14) 🗌 A	Acknowledgment is made of a claim for domesti	c priority under 35 U.S.C. § 119	(e) (to a provisional application).	
) The translation of the foreign language pro Acknowledgment is made of a claim for domest			
Attachmen	t(s)			
2) Notic	re of References Cited (PTO-892) re of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449) Paper No(s) _	5) Notice of Informa	ry (PTO-413) Paper No(s) I Patent Application (PTO-152)	
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Response to Arguments

1. Applicant's arguments with respect to claims 1-30 have been considered but are most inview of the new ground(s) of rejection.

DETAILED ACTION

Specification

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (page 3, paragraph 10 as one example). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claim 1 3 and 16 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaker et al. (Blaker, World Intellectual Property Organization, WO 00/075905) in view of Smith et al. (Smith, US Patent 6,470,003).

Regarding claim 1, Blaker teaches of in a communication system, a method comprising: determining duty cycle of a communication channel (page 9, lines 5 - 17 and page 10, lines 8 - 14); controlling power level of said communication channel based on said determined duty cycle (page 2, lines 12 - 17; page 9, lines 5 - 17).

Blaker does not specifically teach of data frame transmissions.

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In a related art dealing with a transmission method for limiting total duration, Smith teaches of data frame transmissions (column 4, lines 32 - 46 and column 1, lines 45 - 64).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker's transceiver, Smith's data frame transmission system, for the purposes of limiting a total time transmission duration for healthy and safety reasons (SAR recommendations as one example), as taught by Smith.

Regarding claim 2, Blaker in view of Smith teach all the claimed limitations as recited in claim 1. Blaker further teaches of further comprising: comparing said determined duty cycle against a duty cycle threshold (page 10, lines 15 – 21); wherein an adjustment for controlling power level via said controlling is based on said comparing (page 10, lines 8 – 14).

Regarding claim 3, Blaker in view of Smith teach all the claimed limitations as recited in claim 1. Blaker further teaches of comprising: informing a mobile station of said determined duty cycle (page 10, lines 8-15).

Regarding claim 16, Blanker teaches of a communication system, an apparatus comprising: a controller configured for determining duty cycle of a communication channel (page 9, lines 5 - 17 and page 10, lines 8 - 14 and Figures 5a - 5e); wherein said controller further configured for controlling power level of said communication channel based on said determined duty cycle (page 2, lines 12 - 17; page 9, lines 5 - 17 and Figures 5a - 5e).

Blaker does not specifically teach of data frame transmissions.

In a related art dealing with a transmission method for limiting total duration, Smith teaches of data frame transmissions (column 4, lines 32 - 46 and column 1, lines 45 - 64).

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It would have been obvious to one skilled in the art at the time of invention to have included into Blaker's transceiver, Smith's data frame transmission system, for the purposes of limiting a total time transmission duration for healthy and safety reasons (SAR recommendations as one example), as taught by Smith.

Regarding claim 17, Blaker in view of Smith teach all the claimed limitations as recited in claim 16. Blanker further teaches of wherein said controller is configured for comparing said determined duty cycle against a duty cycle threshold (page 10, lines 15 - 21), and wherein an adjustment for controlling power level via said controlling is based on said comparing (page 10, lines 8 - 14).

Regarding claim 18, Blaker in view of Smith teach all the claimed limitations as recited in claim 16. Blaker further teaches of comprising: a transmitter configured for informing a mobile station, via a receiver in said mobile station, of said determined duty cycle (page 10, lines 8 – 15).

5. Claims 4, 5, 8 – 10, 19, 20, and 23 – 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaker et al. (Blaker, World Intellectual Property Organization, WO 00/075905) in view of Smith et al. (Smith, US Patent 6,470,003) as applied to claim 1 above, and further in view of Tiedemann Jr. (Tiedemann, US Patent No. 6,307,849).

Regarding claim 4, Blaker in view of Smith teach all the claimed limitations as recited in claim 1. Blaker does not specifically teach of wherein said controlling comprises of selecting a code channel to pilot channel power ratio for controlling power level of said communication channel.

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In a related art dealing with centralized power control, Tiedemann teaches of wherein said controlling comprises of selecting a code channel to pilot channel power ratio for controlling power level of said communication channel (starting column 8, line 61 and ending column 9, line 23).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Tiedemann's ratio, for the purposes of optimizing and improving the performance of a CDMA system in respect to various facets (multi-carrier environments, soft handover, ect), as taught by Tiedemann.

Regarding claim 5, Blaker in view of Smith and Tiedemann, teach all the claimed limitations as recited in claim 4. Tiedemann further teaches of comprising: informing a mobile station of said selected code channel to pilot channel power ratio (starting column 8, line 61 and ending column 9, line 23).

Regarding claim 8, Blaker in view of Smith teach all the claimed limitations as recited in claim 1. Blaker does not specifically teach of wherein said communication channel is a dedicated control channel.

In a related art dealing with centralized power control, Tiedemann teaches of wherein said communication channel is a dedicated control channel (column 5, lines 6-27).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Tiedemann's ratio, for the purposes of optimizing and improving the performance of a CDMA system in respect to various facets (multi-carrier environments, soft handover, ect), as taught by Tiedemann.

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Regarding claim 9, Blaker in view of Smith and Tiedemann teach all the claimed limitations as recited in claim 8. Tiedemann further teaches of wherein said controlling comprises of modifying a code channel to pilot channel power ratio associated with a traffic channel (starting column 8, line 61 and ending column 9, line 23).

Regarding claim 10, Blaker in view of Smith and Tiedemann teach all the claimed limitations as recited in claim 9. Tiedemann further teaches comprising: using said modified code channel to pilot channel power ratio to control power level of said dedicated control channel (as seen in Figure 3. and column 9, lines 5-53).

Regarding claim 19, Blaker in view of Smith teach all the claimed limitations as recited in claim 16. Blaker does not specifically teach of wherein said controller is configured for performing said controlling by selecting a code channel to pilot channel power ratio for controlling power level of said communication channel.

In a related art dealing with centralized power control, Tiedemann teaches of wherein said controller is configured for performing said controlling by selecting a code channel to pilot channel power ratio for controlling power level of said communication channel (starting column 8, line 61 and ending column 9, line 23).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Tiedemann's ratio, for the purposes of optimizing and improving the performance of a CDMA system in respect to various facets (multi-carrier environments, soft handover, ect), as taught by Tiedemann.

Regarding claim 20, Blaker in view of Smith and Tiedemann, teach all the claimed limitations as recited in claim 19. Tiedemann further teaches of wherein said transmitter is

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configured for informing a mobile station of said selected code channel to pilot channel power ratio (starting column 8, line 61 and ending column 9, line 23 and Figures 1 and 3).

Regarding claim 23, Blaker in view of Smith teach all the claimed limitations as recited in claim 16. Blaker does not specifically teach of wherein said communication channel is a dedicated control channel.

In a related art dealing with centralized power control, Tiedemann teaches of wherein said communication channel is a dedicated control channel (column 5, lines 6 - 27).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Tiedemann's ratio, for the purposes of optimizing and improving the performance of a CDMA system in respect to various facets (multi-carrier environments, soft handover, ect), as taught by Tiedemann.

Regarding claim 24, Blaker in view of Smith and Tiedemann teaches all the claimed limitations as recited in claim 23. Tiedemann further teaches of wherein said controller is configured for said controlling by modifying a code channel to pilot channel power ratio associated with a traffic channel (starting column 8, line 61 and ending column 9, line 23).

Regarding claim 25, Blaker and Smith in view of Tiedemann teach all the claimed limitations as recited in claim 24. Tiedemann further teaches of wherein said controller is configured using said modified code channel to pilot channel power ratio to control power level of said dedicated control channel (as seen in Figure 3 and column 9, lines 5 – 53).

6. Claims 6, 7, 11 – 15, 21, 22, and 26 – 30, are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaker et al. (Blaker, World Intellectual Property Organization, WO

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00/075905) and Smith et al. (Smith, US Patent 6,470,003) as applied to claim 1 above, and further in view of Ziv et al. (Ziv, US Patent No. 5,884,187).

Regarding claim 6, Blaker and Smith teach all the claimed limitations as recited in claim 1. Smith further teaches of data transmissions during at least one said data frame transmission from said mobile (column 4, lines 32 - 46 and column 1, lines 45 - 64).

Blaker in view of Smith do not specifically teach of wherein said communication channel is between a mobile station and a base station, wherein said controlling comprises: adjusting a parameter of a power control outer loop at said base station, wherein said power control outer loop is operating to control power level.

In a related art dealing with power control, Ziv teaches of wherein said communication channel is between a mobile station and a base station, wherein said controlling comprises: adjusting a parameter of a power control outer loop at said base station, wherein said power control outer loop is operating to control power level (starting column 14, line 42 and ending column 15, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claim 7, Blaker and Smith teach all the claimed limitations as recited in claim 1. Smith further teaches of data transmissions during at least one said data frame transmission from said mobile (column 4, lines 32 - 46 and column 1, lines 45 - 64). Blaker in view of Smith do not specifically teach of wherein said communication channel is between a mobile station and

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a base station, wherein said controlling comprises: adjusting a frame error rate set point, at said mobile station, of a power control outer loop, wherein said power control outer loop is operating to control power level.

In a related art dealing with power control, Ziv teaches of wherein said communication channel is between a mobile station and a base station, wherein said controlling comprises: adjusting a frame error rate set point, at said mobile station, of a power control outer loop, wherein said power control outer loop is operating to control power level (starting column 14, line 42 and ending column 15, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claim 11, Blaker and Smith teach all the claimed limitations as recited in claim

1. Blaker further teaches of wherein said controlling comprises of adjusting a target power level for controlling power level of said communication channel (page 2, lines 12 – 17; page 9, lines 5 – 17).

Blaker does not specifically teach of [wherein said controlling comprises of adjusting a target power level] of a pilot channel [for controlling power level of said communication channel].

In a related art dealing with power control, Ziv teaches of [wherein said controlling comprises of adjusting a target power level] of a pilot channel [for controlling power level of said communication channel] (starting column 12, line 65 and ending column 13, line 20).

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It would have been obvious to one skilled in the art at the time of invention to have included into Blaker's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claim 12, Blaker and Smith in view of Ziv, teach all the claimed limitations as recited in claim 11. Ziv further teaches of wherein said communication channel is between a mobile station and a base station, further comprising: communicating said adjusted target power level of said pilot channel to said mobile station (column 17, lines 35 –45).

Regarding claim 13, Blaker and Smith in view of Ziv, teach all the claimed limitations as recited in claim 11. Ziv further teaches of wherein said communication channel is between a mobile station and a base station, wherein said pilot channel originates from the mobile station (column 17, lines 15 - 22 and column 13, lines 4 - 12 and column 16, lines 4 - 6).

Regarding claim 14, Blaker and Smith teach all the claimed limitations as recited in claim

1. Blaker does not specifically teach of wherein said controlling comprises of adjusting a power level of a power control sub-channel.

In a related art dealing with power control, Ziv teaches of wherein said controlling comprises of adjusting a power level of a power control sub-channel (column 17, lines 15-22 and lines 36-45; note that the base stations sends a variety of channels, the pilot being one of the subset).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

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Regarding claim 15, Blaker and Smith in view of Ziv teach all the claimed limitations as recited in claim 14. Ziv further teaches of wherein said communication channel is between a mobile station and a base station, wherein said power control sub-channel originates from said base station (column 17, lines 15 –22 and lines 36 – 45).

Regarding claim 21, Blaker and Smith teach all the claimed limitations as recited in claim 16. Smith further teaches of data transmissions during at least one said data frame transmission from said mobile (column 4, lines 32 – 46 and column 1, lines 45 – 64).

Blaker does not specifically teach of wherein said communication channel is between a mobile station and a base station, wherein said controller is configured for said controlling by adjusting a parameter of a power control outer loop at said base station, wherein said power control outer loop is operating to control power level.

In a related art dealing with power control, Ziv teaches of wherein said communication channel is between a mobile station and a base station (Figure 5), wherein said controller is configured for said controlling by adjusting a parameter of a power control outer loop at said base station, wherein said power control outer loop is operating to control power level of (starting column 14, line 42 and ending column 15, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

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Regarding claim 22, Blaker and Smith teach all the claimed limitations as recited in claim 16. Smith further teaches of data transmissions during at least one said data frame transmission from said mobile (column 4, lines 32 - 46 and column 1, lines 45 - 64).

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Blaker does not specifically teach of wherein said communication channel is between a mobile station and a base station, wherein said controller is configured for said controlling by adjusting a frame error rate set point, at said mobile station, of a power control outer loop, wherein said power control outer loop is operating to control power level.

In a related art dealing with power control, Ziv teaches of wherein said communication channel is between a mobile station and a base station (Figure 5), wherein said controller is configured for said controlling by adjusting a frame error rate set point, at said mobile station, of a power control outer loop, wherein said power control outer loop is operating to control power level (starting column 14, line 42 and ending column 15, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claim 26, Blaker and Smith teach all the claimed limitations as recited in claim 16. Blaker further teaches of wherein said controller is configured for said controlling by adjusting a target power level for controlling power level of said communication channel. (page 2, lines 12 - 17; page 9, lines 5 - 17).

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Blaker does not specifically teach of [wherein said controller is configured for said controlling by adjusting a target power level of] a pilot channel [for controlling power level of said communication channel].

In a related art dealing with power control, Ziv teaches of [wherein said controller is configured for said controlling by adjusting a target power level of] a pilot channel [for controlling power level of said communication channel] (starting column 12, line 65 and ending column 13, line 20).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claim 27, Blaker and Smith in view of Ziv, teach all the claimed limitations as recited in claim 26. Ziv further teaches of wherein said communication channel is between a mobile station and a base station, further comprising: a transmitter in said base station configured for communicating said adjusted target power level of said pilot channel to a receiver in said mobile station. (column 17, lines 35 –45).

Regarding claim 28, Blaker and Smith in view of Ziv, teach all the claimed limitations as recited in claim 26. Ziv further teaches of wherein said communication channel is between a mobile station and a base station, wherein said pilot channel originates from the mobile station (column 17, lines 15-22 and column 13, lines 4-12 and column 16, lines 4-6).

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Regarding claim 29, Blaker and Smith teach all the claimed limitations as recited in claim

16. Blaker does not specifically teach of wherein said controller is configured for said

controlling by adjusting a power level of a power control subchannel.

In a related art dealing with power control, Ziv teaches of wherein said controller is configured for said controlling by adjusting a power level of a power control subchannel (column 17, lines 15 –22 and lines 36 – 45; note that the base stations sends a variety of channels, the pilot being one of the subset).

It would have been obvious to one skilled in the art at the time of invention to have included into Blaker and Smith's transceiver, Ziv's control mechanism, for the purposes of centralizing power control and thus simplify the traditional power control mechanism, as taught by Ziv.

Regarding claim 30, Blaker and Smith in view of Ziv teach all the claimed limitations as recited in claim 29. Ziv further teaches of wherein said communication channel is between a mobile station and a base station, wherein said power control sub-channel originates from said base station (column 17, lines 15 –22 and lines 36 – 45).

Citation of Pertinent Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Inventor	Publication	Number	Disclosure
Park et al.	US Patent	6,480,481	Gated Transmission in Control
			Hold State in CDMA
	A 1		Communication System
Tiedemann Jr.	US Patent	6,307,849	Method and System for
			Changing Forward Traffic
			Channel Power Allocation
			During Soft Handover

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Roddy et al.	US Patent	6,127,740	System For Controlling Signal Strength in a Remote Transmitter
Ziv et al.	US Patent	5,884,187	Method and Apparatus for Providing Centralized Power Control Administration for a Set of Base Stations
Soleimani et al.	US Patent	5,659,892	Operation of Low Cost Fixed Output Power Radio in Fixed Gain Mode
Gilhousen et al.	US Patent	5,603,096	Reverse Link, Closed Loop Power Control in aCDMA System
Blaker et al.	World IP Organization	WO 00/075905	Transceiver with Closed Loop Control of Antenna Tuning and Power Level
Jacobsen	World IP Organization	WO 02/19562	Wireless Communication System Determines Antenna Gain Parameter Associated with Generated Transmission Beam to Adjust Transmission Power Level

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanmay S Lele whose telephone number is (703) 305-3462. The examiner can normally be reached on 9 - 6:30 PM Monday – Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (703) 308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Tanmay S Lele Examiner Art Unit 2684

tsl August 21, 2003